OVER THE ROAD

Reduced Speed Ahead

Shifting priorities force some smart highway projects to pump the brakes

GETTY IMAGES

Wattway, a photovoltaic road surface

THE RAY

By Matt Alderton

IF THERE WERE INFIRMARIES for infrastructure, American roadways would be laid up in the intensive care unit. So suggests the American Society of Civil Engineers, which gave U.S. highways a 'D' grade in its 2017 Infrastructure Report Card.

Despite the dire prognosis, things were looking up as recently as last summer thanks to a handful of "smart highway" projects underway across the nation, the most ambitious of which was Colorado's RoadX program.

Launched in 2015 by the Colorado Department of Transportation (CDOT), its mission was to "make Colorado one of the most technologically advanced transportation systems in the nation, and a leader in safety and reliability."

Plans were underway to pilot innovations like vehicle-to-everything (V2X) technology, which allows internet-connected vehicles to exchange data with each other and with infrastructure, and "smart pavement" — precast concrete slabs embedded with sensors to analyze traffic and detect errant driver behavior.

But RoadX has hit a roadblock. Newly elected Gov. Jared Polis retired RoadX, although CDOT insists its commitment to smart highways will live on in a new Office of Innovative Mobility.

The state's transportation agency "is committed to providing mobility options for all Coloradans by leveraging traditional and innovative approaches,"

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Colorado has retired the RoadX project, rolling some of its initiatives into the new Office of Innovative Mobility.

INTEGRATED ROADWAYS; GETTY IMAGES

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– ALLIE KELLY, executive director, Ray C. Anderson Foundation

according to a written statement from CDOT. The new Office of Innovative Mobility "will work to deliver reliable, cleaner transportation choices that help to reduce congestion on the road and in the air, through projects such as electrifying transit fleets, connecting to existing transit through on-demand services and mobility hubs or expanding transit systems to make them more consistent."

Partners in the project aren't quite so optimistic. "As for RoadX, we've been in limbo," said Tim Sylvester, founder, CEO and chief technology officer of Kansas City, Mo.-based Integrated Roadways, maker of the smart pavement being used in the RoadX program. "As we understand it, all contracts with CDOT have been frozen until (executive director Shoshana Lew) gives her personal approval for the work to proceed."

Another program that has followed a similar trajectory is Road to Tomorrow, launched in 2015 by the Missouri Department of Transportation (MoDOT) with the goal of soliciting new ideas for future highways.

"The Road to Tomorrow initiative was an excellent way to determine what innovative ideas were being considered by entrepreneurs across the nation, as well as what types of markets and funding were available to support and launch those creative concepts," explained MoDOT Director Patrick K. McKenna, who said Road to Tomorrow resulted in approximately 350 proposals; MoDOT pursued five of them, but none resulted in contracts due to "instability in product and project delivery."

Innovative technologies "are costly to cultivate, test and implement. Given our limited funding in Missouri, we believe these types of explorations should appropriately fall to the private sector to undertake and champion," McKenna said.

The country has one smart highway left in the proverbial fast lane: the philanthropically funded Ray C. Anderson Memorial Highway in Troup County, Ga. An 18-mile stretch of I-85 named for a late Georgia businessman who was committed to sustainability, "The Ray" is supported by the Ray C. Anderson Foundation. It has piloted electric vehicle charging stations, photovoltaic road surfaces that harvest solar energy and a high-tech tire pressure monitoring system, WheelRight, which promotes safety and fuel efficiency by texting drivers when their tires need air.

WheelRight station

THE RAY

"DOT programs ... are vulnerable to political changes," said Allie Kelly, executive director of the Ray C. Anderson Foundation. "There's something about our model that helps to ground and anchor the work. It helps to insulate us and protect us from what has happened in Missouri and Colorado."

That protection has allowed The Ray to continue propagating new technologies regardless of public-sector priorities. This summer, for example, it's repaving a mile of roadway with rubberized asphalt made from recycled tires, which will increase noise mitigation and crack resistance; installing the next generation of Wattway, a photovoltaic road surface; installing road striping that's designed to help guide autonomous vehicles; and co-developing, with Panasonic and the Georgia Department of Transportation, data infrastructure that eventually will allow The Ray to become a test bed for V2X technology.